



ANNUAL REPORT

OF THE

Public Health Department of the
City of Port-of-Spain

FOR THE YEAR

1940

BY

RODERICK MARCAÑO, M.D. (Lond.), M.R.C.P. (Lond.), D.P.H. (Lond.).
MEDICAL OFFICER OF HEALTH.

TRINIDAD :
PRINTED BY THE GOVERNMENT PRINTER,
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PORT-OF-SPAIN.

1941.



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*With the Compliments
of
The Medical Officer of Health*

*Port-of-Spain,
Trinidad, B.W.I.*



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Public Health Department of the
City of London

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Local Authority in the Urban Sanitary District of the City of Port-of-Spain.

1939-40.

The City Council.

HIS WORSHIP THE MAYOR (ALDERMAN THE HONOURABLE ARTHUR ANDREW CIPRIANI, J.P.)

Deputy-Mayor.

COUNCILLOR LEO ALEXANDER PUJADAS.

Aldermen.

A. P. T. AMBARD.

H. A. DE FREITAS.

GASTON JOHNSTON, K.C.

MURCHISON RIGSBY.

Councillors.

N. K. ABLACK.

A. RICHARDS.

DR. T. P. ACHONG.

M. G. SINANAN.

G. CABRAL.

G. L. THOMAS.

A. GOMES.

L. B. THOMAS.

V. D. GORMANDY.

V. R. VIDALE.

G. J. MCCARTHY.

L. WALCOTT.

E. M. MITCHELL.

R. A. YOUNG.

Annual Report of the Public Health Department of the City of Port-of-Spain, 1940.

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PUBLIC HEALTH DEPARTMENT,
35, FREDERICK STREET,
PORT-OF-SPAIN,
TRINIDAD, B.W.I.,

13th October, 1941.

URBAN SANITARY DISTRICT OF THE CITY OF PORT-OF-SPAIN.

SECRETARY LOCAL AUTHORITY,

Sir,

I have the honour to submit, for the information of the Local Authority, the Annual Report on the health and sanitary condition of the Urban Sanitary District of the City of Port-of-Spain for the year ended 31st December, 1940.

The state of the public health during the year, which forms the subject of this report, can be considered to be, on the whole, quite satisfactory, no outbreaks of epidemic disease having been recorded and the vital statistics revealing a picture of steady improvement in very many directions.

The population of the City was estimated to be 92,302 as compared with 90,375 for 1939, an increase of 1,927 souls, of which figure 1,369 represent the natural increase, *i.e.*, the excess of births over deaths.

The birth rate worked out at 31.82, the death rate 16.99 per 1,000 population ; the maternal mortality 4.09, and the infant mortality rate 99.08 per 1,000 live births.

As regards the death rates for infectious diseases the figures show a decline on the corresponding for 1939, the death rate for notifiable infectious diseases being 2.25 per 1,000 population, as compared with 2.87 per 1,000 population in 1939.

The death rate for pulmonary tuberculosis declined from 1.85 to 1.28 per 1,000, that for enteric fever from .17 to .12 per 1,000 population.

The rate for malaria was .20 per 1,000 and syphilis .38 per 1,000, as compared with the corresponding rates in 1939 of .21 and .29 per 1,000 population.

No improvement in the mortality attributable to the chronic system diseases has been noted ; on the contrary the figures were, on the whole, slightly higher than those for 1939.

Cancer and other malignant diseases were responsible for a mortality of .85 per 1,000 as compared with .84 per 1,000 in 1939.

The routine activities of the Department continued unabated, but special attention was directed, during the year, to the housing and the food problem in both of which it is gratifying to be able to record satisfactory progress though, of course, much leeway remains to be made up.

The continuation of hostilities has, so far, had no noticeable effect on the state of the public health but it is feared that there is a possibility of an increase of those so-called social diseases which are associated with the presence of the soldiery in an urban population ; and soaring prices coupled with the relative scarcity, on occasions, of certain essential commodities may possibly affect the level of resistance of the poorer sections of the community—a state of affairs which is usually reflected in an increase in the incidence and the mortality of tuberculosis, pneumonia and other infectious diseases, as well as of the large group of deficiency diseases which are due to a deficient intake of the essential accessory food factors known as vitamins.

Two main problems which have a direct bearing on the public health still remain to be solved and are, at the moment, engaging the very earnest attention of the Public Health Department in collaboration with the Departments of the City Engineer and the Town Clerk. I refer to Water and Sewerage.

The question of providing a sufficient supply of water for the increasing population has been brought to the forefront by two events during the year under review :

(a) The comparative drought which prevailed in the earlier part of the year and which had an adverse effect on the gravitational sources of supply and

(b) The findings of the Committee appointed to " consider and report on the entire water supply of the City of Port-of-Spain " which, stated briefly, recommended the establishment of a single large gravitational source of supply removed from sources of possible pollution, such as may be obtained from the Aripo River, but which permitted, as an emergency measure for the duration of war, the drilling of one or more additional wells adjacent to the Farrell Pumping Station at Cocorite to augment the present inadequate supply.

I am able to record that City Engineer is, at the moment, actively engaged in putting into effect this latter suggestion.

The sewerage of Belmont and East Dry River, the two most unhealthy sub-districts of the Urban Sanitary District, is an urgent necessity to which I have referred on previous occasions and should be undertaken at the earliest possible opportunity, the necessary funds to be obtained by the raising of a loan for the purpose.

The plans have all been prepared by the City Engineer's Department and are ready to be translated into actual fact as soon as the necessary materials can be obtained.

Finally, my sincere and grateful thanks are due to His Worship the Mayor, Aldermen and Councillors for the deep interest they take in all matters affecting the state of the public health, and for the ready support they gave to all measures designed to ameliorate the health of the Urban Sanitary District which engaged the attention of the Local Authority during the year and I take this opportunity to record, also, my appreciation of the help given by the City Engineer's and the Town Clerk's Departments in all matters of mutual concern.

I have the honour to be,

Sir,

Your obedient servant,

RODERICK MARCANO,
Medical Officer of Health.

SANITARY CIRCUMSTANCES.

Water.

The daily bacteriological examination of the sample of mixed City Water taken from a tap at the Laboratory and the weekly bacteriological examination of the samples taken at the various sources of supply show that, although a high standard of potability was maintained during the year, there were more samples which were deemed unsafe for human consumption than during the previous year (1939) necessitating the addition, on these occasions, of an increased amount of chlorine to the water.

Bacteriological Examination of Water Supply. (Mixed)

No. of daily samples examined.	No. of samples with B. coli present.	Percentage of samples with B. coli present.	No. of samples with B. coli absent.	Percentage of samples with B. coli absent.
366	11	3.01	355	96.99

Bacteriological Examination of Water Supply.

No. of Weekly Samples giving Positive Results.

(B. coli present in 100 c.c.).

Where Derived.	Before Chlorination.	After Chlorination.
*Maraval (River)	17	1
*St. Clair (Wells)	—	5
Knaggs' Hill (Reservoir)	—	5
†St. Ann's (River)	13	—
†Ariapita (Stream)	2	—
†Cascade (River)	20	5
‡Cocorite (Wells)	5	5
‡Diego Martin (Wells)	6	—
Total	63	21

* Filtered after Chlorination.

† Filtered before chlorination.

‡ Not filtered.

Seasonal Rainfall, Infectious Diseases, and Deaths.

Rainfall, Notifications and Deaths.	Dry Season Jan.-May	Wet Season June-Dec.	Total	Monthly Average	Corresponding Average for 1939.
Rainfall in inches	4.09	39.05	43.14	3.60	3.80
Infectious Diseases :					
Notifications	183	240	423	35.25	43.92
Deaths	69	139	208	17.33	21.58
Deaths under 1 year	106	185	291	24.25	20.17
Deaths at ages 1-5	29	30	59	4.92	4.67
Deaths at all ages	621	947	1,568	130.67	126.33

Sewage Disposal.

The fear of the spread of infectious diseases—Typhoid Fever and Dysentery particularly—by the agency of sewage is a real and ever-present one in the unsewered areas and the oiling of pits is part of the routine work of the Disinfection Unit.

Besides, oil (a mixture of crude and distillate in the proportion of 1 : 5) tends to diminish the emanation of offensive odours from cesspits—a nuisance which can be very annoying and is a frequent cause of complaint to the Department.

CESSPITS SPRAYED WITH CRUDE AND DISTILLATE OILS. (Particularly for Infectious Diseases.)

	No. of Cesspits.
Free of charge	44,674
Paid for	541
Total	45,215

SANITARY INSPECTION OF THE DISTRICT.

Anti-Rat Measures.

DESTRUCTION OF RATS AND MICE.

Rats caught by Trappers	....	....	....	....	9,676
Rats bought	....	....	....	....	625
Total....	....	....	....	....	10,301
Mice caught and destroyed	....	....	....	....	4,470

EXAMINATION OF RATS BY GOVERNMENT BACTERIOLOGIST.

Rats examined for Plague	....	....	....	....	10,274
Rats found infected with Plague	....	....	....	....	—
Immature Rats not examined	....	....	....	....	27

SPECIES.

			<i>Decumanus.</i>	<i>Rattus.</i>	<i>Total.</i>
Males	....	....	2,823	2,622	5,445
Females	....	....	2,407	2,422	4,829
Total	....	....	5,230	5,044	10,274

Anti-Mosquito Measures.

Inspection of Eaves Gutters, &c.

			<i>Total Entire City.</i>	<i>Total St. James only.</i>
Number of Inspections of Premises....	....	....	126,333	20,467
Number of Inspections of Eaves Gutters	....	....	35,591	461
Occasions found in good order	....	....	33,314	453
Occasions found defective....	....	....	2,277	8
Occasions containing water	....	....	502	1
Occasions containing water and larvae	....	....	245	3
Occasions mosquito larvae were found in tubs, antiformicas, tin cans, &c.	....	....	3,034	889
Yards cleared of receptacles	....	....	8,322	1,156

Larval Index.

	<i>Year.</i>		<i>City excluding St. James.</i>	<i>St. James only.</i>	<i>Entire City.</i>
1938	1.43	12.61*	2.58
1939	1.84	0.85	1.70
1940	1.23	2.70	1.45

Dairies and Milk Shops.

The figures hereunder tabulated show that milk, as a source of food supply, is attaining a greater and greater degree of popularity ; more cowsheds licences (52 as against 33), more dairyman's licences (97 as against 70) and more milk vendors licences (223 as against 181) and badges (222 as against 209) having being issued in 1940 than in 1939.

The bulk of this milk is consumed in the raw state, unheated, in the various establishments of the City.

DAIRIES AND MILK SHOPS.

<i>Sub-District.</i>					<i>Cowshed Licences Issued.</i>
City Proper (sewered)	....	....	....	....	3
East Dry River (unsewered)	....	....	....	....	—
Belmont (unsewered)	....	....	....	....	3
Woodbrook (partly sewerred)	....	....	....	....	12
St. James (unsewered)	....	....	....	....	34
Total	....	....	....	....	52

* St. James was included in the City, 1st June, 1938.

DAIRYMAN'S LICENCES.

Dairyman's Licences issued to cowkeepers and other purveyors of milk	....	....	....	....	....	55
Dairyman's Licences issued to milk shops, milk bars, and refreshment parlours	....	....	....	....	....	42
Total	....	....	....	....	....	97

MILK VENDOR'S LICENCES AND BADGES.

<i>City and Out-districts.</i>	<i>Milk Vendors' Licences.</i>	<i>Badges.</i>	<i>Cows Tuberculin Tested.</i>
Port-of-Spain	99	72	212
Out-districts	124	150	633
Total	223	222	845

Premises used for Human Habitation.

The position as regards housing may be summed up briefly as follows :—

An increasing scarcity of housing accommodation coupled with rising rentals is causing great hardship to all sections of the population.

Several factors are responsible for this state of affairs :—

- The natural increase of population without a corresponding increase in the number of houses ;
- A large number of immigrants from the North American Continent—the result of the establishment of Bases in different parts of the Colony ;
- An influx of labourers, artisans and technicians from the country to the town ;
- The reconstruction of the large majority of barracks in the down-town portion of the City into busines places.

The high rentals charged are due partly to the increased cost of materials essential to reconstruction and the higher wages demanded by labour and partly to the increasing scarcity of houses.

In a situation which is admittedly difficult and, which continues to deteriorate, great credit is due to the Planning and Housing Commission which has succeeded, in spite of difficulties, in erecting a large number of houses—530 all told—for the working classes, at Morvant and at St. James. At the time of writing 90 are ready and are being occupied at St. James and 440 at Morvant. The rental charged is \$4.00 per house of two rooms, gallery and conveniences all under the same roof.

The problem will not, however, be solved by this provision which is far from being adequate and which is in the nature of alternative accommodation for tenants displaced from blocks in the City where clearance or improvement is imperative. It is gratifying to know that the magnitude of the problem is keenly appreciated and that an effort to deal with the situation will be made when the blocks now being emptied are redesigned and rebuilt, and when lands now being reclaimed from the sea on the eastern side of the City, south of lands of the Trinidad Government Railway, have been built upon.

In the meantime one cannot but feel distressed by the suffering that the poorer people are called upon to endure, a suffering which is now beginning to affect the white-collared worker and his family in a particularly acute way.

If ever a champion were needed to take up the cudgels on his behalf, this surely is the time.

A certain slowing up of the work of the Local Authority under this heading, in view of what has been detailed above, was therefore inevitable in the year under report seeing that demolition and reconstruction must, of necessity, proceed more and more slowly in proportion as alternative accommodation becomes more and more restricted; but the figures for 1940 shown in the table hereunder do not compare unfavourably with those for 1939.

Housing.

	<i>Resulting from Service of Nuisance Notices.</i>	<i>Voluntarily on Owners' part.</i>	<i>Total.</i>
Barracks and other Premises reconstructed or reconditioned	187	176	363
Barracks demolished and Sites left vacant	9	6	15
Barracks vacated	12	3	15
Total....	208	185	393

Food.

Last year I referred to the efforts of the Public Health Department which were directed towards the improvement of the quality of the food supply ; the work in this particular direction continued during the year under review with results which may, fairly, be left to the judgment of the understanding public.

An added problem, the direct result of the war that is now being waged, relates to the quantity of available foodstuffs, local and imported, and to the high prices which are the order of the day.

First class proteins like butter, cheese, eggs, ham, bacon, &c., which are indispensable to the economy have in some cases more than doubled in price and the man in the street has, on occasions, found difficulty in getting a sufficient supply.

Essential green vegetables, like water cress, lettuce, cabbage and fruit are very scarce and quite often conspicuous by their absence in the markets.

If I make reference to these difficulties it is only to say, in the same breath, that they are infinitesimal compared with the sacrifices in this particular respect that the inhabitants of the belligerent countries are having to undergo and that they are being tackled by the responsible authorities in a very satisfactory way.

In fact it is true to say that, at the time I write, the situation has improved considerably and that it is only a question of time before it will have returned to normal.

Sale of Foodstuffs Bye-Laws.

REGISTRATION OF SHOPS, &C.

	No.
Provision, Meat and Spirit Shops	
Restaurants, Hotels, Refreshment Parlours	513
Ground Provision and Fruit Shops	37
Bakehouses	42
Confectionery Shops	4
Aerated Water Factories	5
Other Factories	2
	603

REGISTRATION OF VENDORS.

Bread and Cakes	90
Confectionery	64
Cooked Food including Fries, Souse, &c.	49
Meat, Fish and Cheese	86
Ice Cream and Palets	77
Sweet Drinks	46
Vegetables, Greens and Fruit	263
Miscellaneous	54
Total	729
No. of Badges issued to itinerant vendors	595
No. of Oyster Vendors licensed under Sale of Oysters Bye-laws	4

Foodstuffs Seized and Destroyed.

Apples	50	Herrings—Smoked	box	1
Bread, Cakes	449	Mixed Vegetables, Petit Pois	tins	10
Cereals	23	Plantains		136
Cocoa Powder	15	Potatoes	pounds...	30
Condensed Milk	273	Prunes	pounds	28
Cones (for Ice Cream)	44	Salmon, Sardines, Shrimps	tins	109
Corned Beef, Pork and Beans	34	Shrimps	pounds...	13
Corn Meal, Flour, Rice	416	Water Melon	pieces	11
Garlic	108			

Foodstuffs Surrendered and Destroyed.

Condensed Milk	79	Fish	pounds...	22
----------------	----	------	-----------	----

VITAL STATISTICS OF THE DISTRICT.

Comparative Summary of Vital Statistics.

(Unless otherwise stated rates are per 1,000 population.)

1921 and 1940.

	1921	1940	Percentage of Increase or Decrease.
Area of City in Acres (pastures and open spaces included)	1,793	2,540	+41.66
Estimated Mean Population	61,386	92,302	+50.36
Density of Population (persons per acre)	34.2	36.3	+ 6.14
Birth Rate	27.28	31.82	+16.64
Death Rate	26.83	16.99	-36.68
*Infant Mortality Rate	170.12	99.08	-41.76
Infectious Diseases Death Rate	4.01	2.25	-43.89

1930-40.

					<i>Average</i>	1930-39	1939	1940
Total Live Births	2,222.4	2,752	2,937
Birth Rate	29.65	30.45	31.82
Still Births registered		167.9	190	214
*Still Birth Rate	74.9	69.0	72.8
Marriages registered		712.0	988	987
Marriage Rate	9.35	10.93	10.69
Total Deaths	1,241.6	1,516	1,568
Death Rate	16.43	16.77	16.99
Natural Increase of Population		1,007.8	1,236	1,369
Deaths under one year	218.2	242	291
*Infant Mortality Rate	98.33	87.94	99.08
*Maternal Mortality Rate	6.84	5.09	4.09

Death Rates :

Notifiable Infectious Diseases	3.08	2.87	2.25
Pulmonary Tuberculosis	1.73	1.85	1.28
Tuberculosis (other forms) ....	.15	.17	.15
Enteric Fever ....	.16	.17	.12
Pneumonia (all forms) ....	.98	.65	.68
Bronchitis ....	.66	.59	.48
Diphtheria ....	.03	.02	.02
Malaria ....	.36	.21	.20
Syphilis ....	.31	.29	.38
Diarrhoea and Enteritis ....	.61	.50	.79
Influenza ....	.06	.03	.01
Ankylostomiasis ....	.03	.02	.03
Bright's Disease and Nephritis ....	.90	.67	.90
Diseases of the Heart and Blood Vessels	2.33	1.97	2.28
Diseases of the Nervous System including Cerebral Haemorrhage	1.30	1.59	1.50
Cancer and other Malignant Diseases ....	.73	.84	.85

* Per 1,000 Births.

Births and Birth Rates.

Deaths and Death Rates.

These figures tell the same old story that is apparent in a variety of ways, *i.e.*, that the East Dry River and the Belmont sub-districts are the most unhealthy in the Urban Sanitary District furnishing a higher death rate per 1,000 population than any other sub-district, not excluding the recently included area of St. James (if deaths occurring in the House of Refuge are specifically excluded).

Births.

Months.					Males.	Females.	Both Sexes.	Birth Rate per 1,000 population.
January-March	...	...	...	...	409	421	830	36.16
April-June	...	...	...	...	400	334	734	31.98
July-September	...	...	...	...	346	315	661	28.49
October-December	...	...	...	...	362	350	712	30.69
Total	...	...	...	...	1,517	1,420	2,937	31.82

Deaths.

Months.					Males.	Females.	Both Sexes.	Death Rate per 1,000 population.
January-March	...	...	...	...	212	157	369	16.08
April-June	...	...	...	...	199	180	379	16.51
July-September	...	...	...	...	215	212	427	18.40
October-December	...	...	...	...	199	194	393	16.94
Total	...	...	...	...	825	743	1,568	16.99

Deaths in Sub-districts of the City.

Sub-District.	Population.	DEATHS.				Total Deaths in Sub-district.	Rate per 1,000 population.
		PLACE OF OCCURRENCE					
		Home, &c.	Colonial Hospital.	Royal Gaol.	House of Refuge.		
City Proper ...	33,253	213	249	2	...	464	13.95
St. Clair ...	1,537	6	5	...	...	11	7.16
East Dry River ...	19,755	152	144	...	...	296	15.04
Belmont ...	15,583	147	97	...	...	244	15.66
Woodbrook ...	11,524	90	41	...	...	131	11.37
St. James ...	10,650	91	47	...	284	422	39.62
Total ...	92,302	699	583	2	284	1,568	16.99

Comparison of Death Rates.

							No. of Deaths.	Death Rate per 1,000 population.
(1)	City (St. James excluded)	...	...	...	...	...	1,146	14.04
(2)	City, including St. James	...	...	...	...	...	1,568	16.99
(3)	City, as in (2), but omitting House of Refuge	...	...	...	...	...	1,284	14.20
(4)	St. James (House of Refuge excluded)	...	...	...	...	...	138	18.87

Chart A

Port-of-Spain

BIRTH-RATES and DEATH-RATES per, 1,000 Population, 1920-1940.

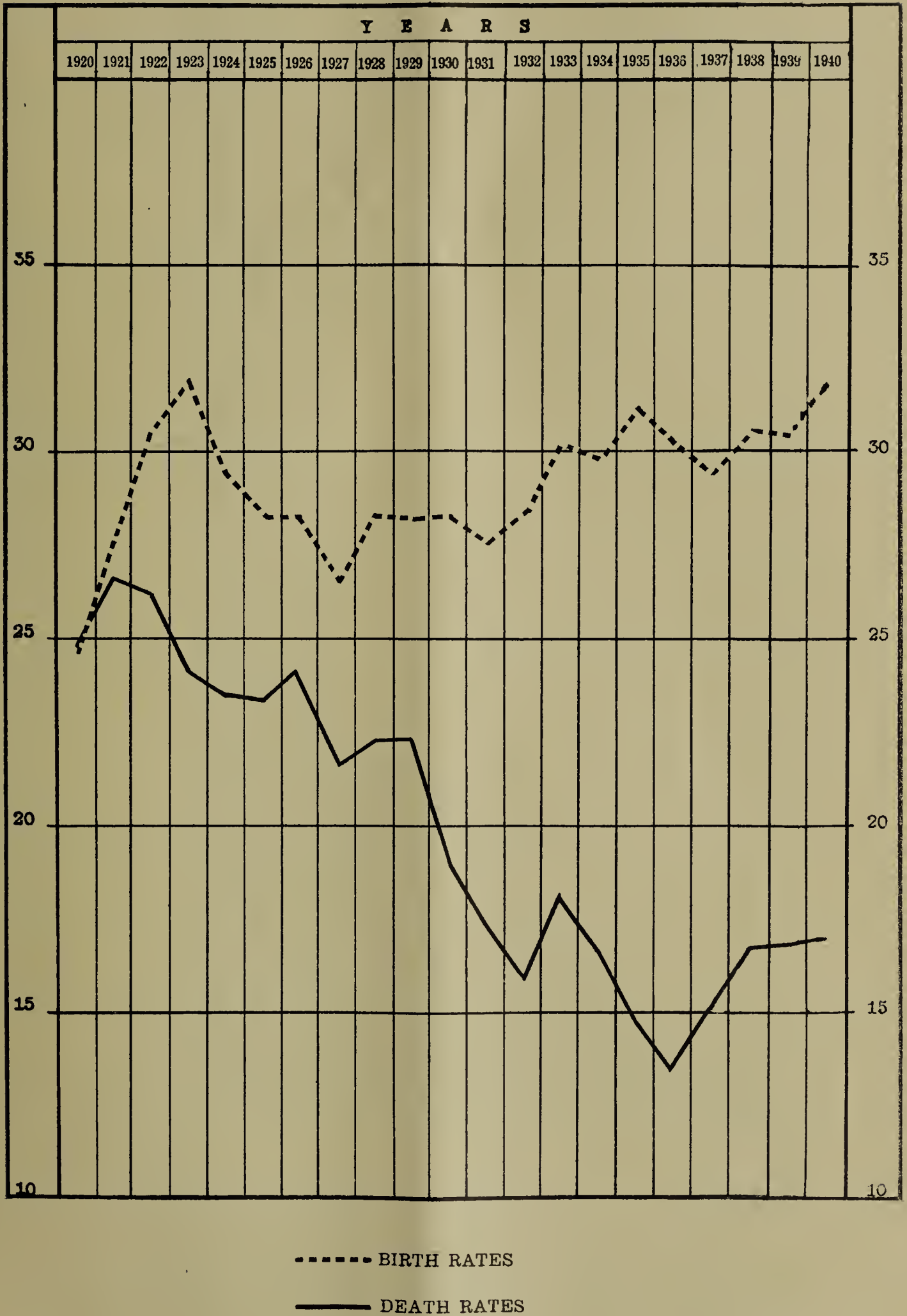
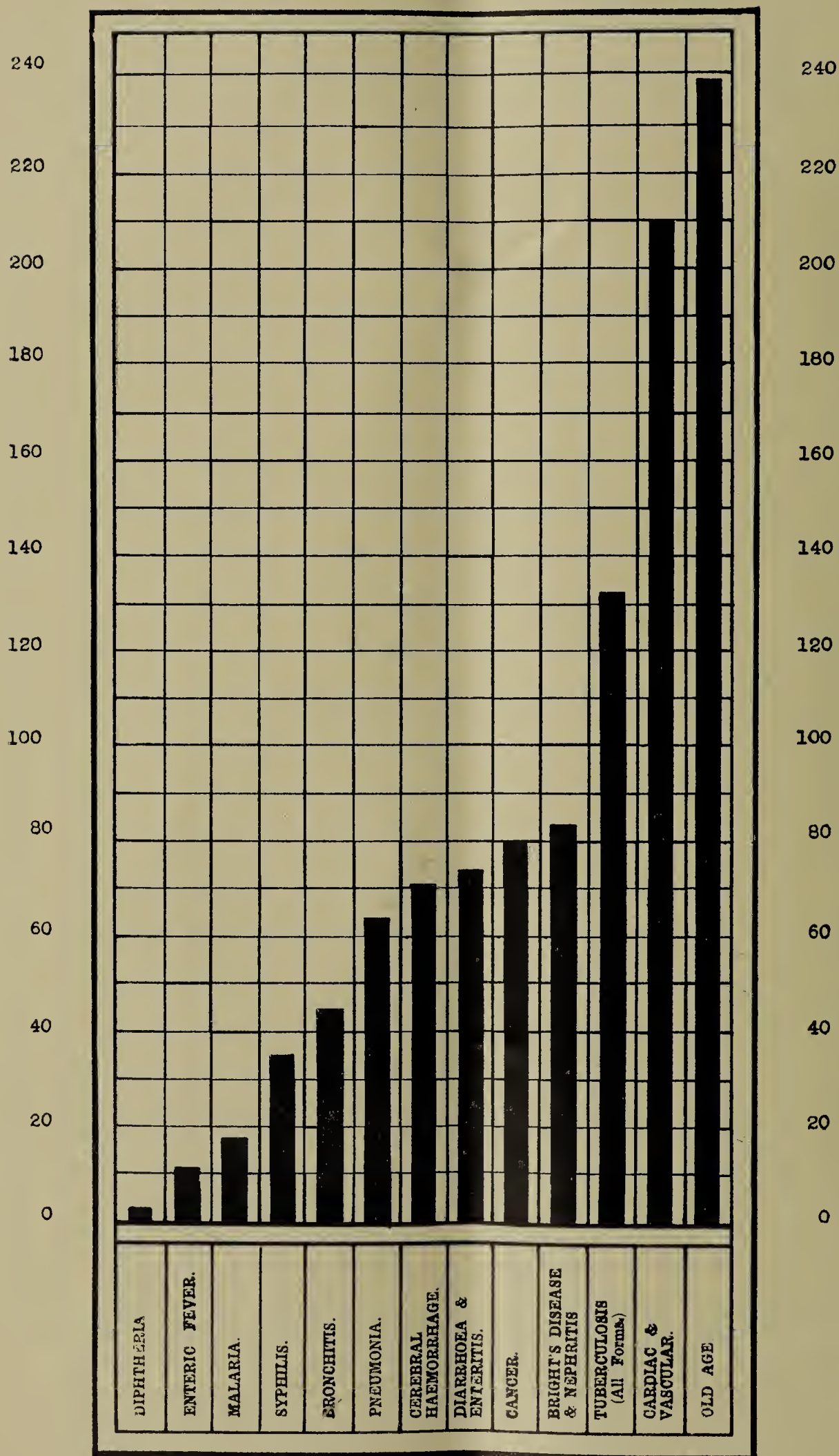


Chart B
Port-of-Spain
Principal Individual CAUSES OF DEATHS—1940.



Causes of Deaths.

I.—GENERAL DISEASES.

(a) Notifiable Infectious Diseases.

Enteric Fever	11
Diphtheria	2
Membranous Croup ... ..	...
Pulmonary Tuberculosis	118
Tuberculosis (other forms)	14
Pneumonia and Broncho- Pneumonia	63
Chicken Pox ... ..	...
Ophthalmia Neonatorum ... ..	...
Plague ... ..	...
Cholera ... ..	...
Small Pox ... ..	...
Typhus Fever ... ..	...
Yellow Fever ... ..	...
Encephalitis Lethargica ... ..	...
Acute Poliomyelitis ... ..	...
Acute Ascending Myelitis ... ..	...
Cerebro-Spinal Fever ... ..	...
	208

(b) Non-Notifiable Infectious Diseases.

Malaria	18
Whooping Cough ... ..	...
Influenza	1
Dysentery	9
Ankylostomiasis	3(1)
Syphilis	35(18)
Other Venereal Diseases ... ..	...
Black Water Fever	1
	67(19)

II.—OTHER DISEASES.

(a) General Diseases not included above.

Cancer and other Malignant Diseases	78(3)
Pellagra	1
Leprosy ... ..	...
Other General Diseases	36(2)
	115(5)

(b) Diseases of the Nervous System and
Organs of Special Sense.

Simple Meningitis	8
Cerebral Haemorrhage	69
Apoplexy	2
Convulsions of Children under 5 years	7
Other diseases of the Nervous System	52

138(23)

(c) Diseases of the Circulatory System.

Cardiac and Vascular Diseases ...	210(7)
-----------------------------------	--------

(d) Diseases of the Respiratory System.

Bronchitis	44
Other diseases of the Respiratory System	23

67(5)

(e) Diseases of the Digestive System.

Diarrhoea and Enteritis	73
Cirrhosis of Liver	9
Other diseases of the Digestive System	55

137(1)

(f) Non-Venereal Diseases of the
Genito-Urinary System.

Bright's Disease ... ..	...
Nephritis	83
Other Non-Venereal Diseases	69

152(8)

(g) Diseases of the Puerperal State.

Puerperal Sepsis	3
Puerperal Eclampsia	2
Puerperal Haemorrhage	3
Other Puerperal Diseases	4

12

(h) Diseases of Early Infancy 156(4)

(i) Old Age ... 238(173)

(j) Affections produced by External Causes

Burns and Scalds	1
Accidents and Injuries	26

27

(k) Other Causes of Death ... 41(39)

Grand Total ... 1,568(284)

N.B.—Numbers in brackets represent deaths
from House of Refuge.

Age Distribution of Deaths.

Period.	Males.	Females.	Both Sexes.	Percentage of Total Mortality at All Ages.
Under 1 year	173	118	291	18.56
1- 5 years	37	22	59	3.76
6-10 do.	5	13	18	1.15
11-20 do.	29	35	64	4.08
21-30 do.	48	52	100	6.37
31-40 do.	75	52	127	8.10
41-50 do.	96	67	163	10.40
51-60 do.	97	85	182	11.61
Over 60 years	265	299	564	35.97
Total	825	743	1,568	...

Comparison of Deaths at different Age Periods for 13 years, 1928-40.

Period.	Total Deaths at All Ages.	DEATHS UNDER 1 YEAR.		DEATHS 1-5 YEARS.		DEATHS 56-60 YEARS.		DEATHS OVER 60 YEARS.	
		No.	Percentage of Total Deaths.	No.	Percentage of Total Deaths.	No.	Percentage of Total Deaths.	No.	Percentage of Total Deaths.
Yearly Averages:									
1928-32	1,327	230	17.42	81	6.06	94	7.09	336	25.10
1933-37	1,167	215	18.24	62	5.29	87	7.57	289	24.74
1938	1,410	204	14.46	69	4.89	107	7.58	484	34.33
1939	1,516	242	15.96	56	3.69	108	7.13	539	35.55
1940	1,568	291	18.56	59	3.76	101	6.44	564	35.97

Still Births.

Year.	Total Still Births.	Rate per 1,000 Live Births.
1940	214	72.86
1939	190	69.04

INFANT MORTALITY.

Though the infant mortality rate has been below 100 for the past three years, the rate has been showing a slight upward trend from the record low figure of 64.92 in 1936, the lowest that it has ever been since 1917, when the Local Authority first came into being.

One had hoped that the efforts of the various bodies concerned with Maternity and Child Welfare having culminated in the low figure of 64.92 in 1936, the figure would have been maintained at that low level but such has not been the case.

Of still greater significance, as indicating the importance of the efficient treatment of parental disease as well as of timely, skilled and judicious midwifery, is the fact that the neo-natal mortality is looming more and more largely into the picture constituting as it does almost fifty (50%) per cent. of the total infant mortality.

In the five-year period 1930-34 the neo-natal mortality was about forty (40%) per cent., roughly, of the total infant mortality whereas in the five-year period 1935-39 it constituted about fifty (50%) per cent.

It is clear that the progress which has been made in reducing the excessive infant mortality which obtained at the beginning of the past decade has been mainly in the case of infants which have survived the critical first month of extra-uterine life.

A concentration of effort to secure the eradication of those diseases of parents which have a direct bearing on the infant in the mother's womb, and the provision of efficient and sufficient ante-natal, intra-natal and post-natal care, both of mother and child, in suitable and congenial surroundings, and also to secure adequate nutrition of mother, father and child, has become a matter of urgent necessity.

Infant Mortality.

Births and Deaths of Infants under 1 year, 1917-40.

Period.					No. of Births.	No. of Deaths under 1 year.	Infant Mortality Rate.
Year 1917	...	...	...	...	1,770	412	232.77
Yearly Averages :							
1918-22	...	...	...	...	1,700	310	182.94
1923-27	...	...	...	...	1,862	274	146.96
1928-32	...	...	...	...	1,925	230	119.13
Average 1918-32	...	...	...	...	1,832	271	149.68
Year 1933	...	...	...	...	2,167	264	121.83
1934	...	...	...	...	2,185	243	111.21
1935	...	...	...	...	2,319	181	78.05
1936	...	...	...	...	2,295	149	64.92
1937	...	...	...	...	2,273	237	104.26
Average 1933-37	...	...	...	...	2,248	215	96.05
Year 1938	...	...	...	...	2,591	204	78.73
1939	...	...	...	...	2,752	242	87.94
1940	...	...	...	...	2,937	291	99.08

Chart C

Port-of-Spain

INFANT MORTALITY RATES per 1,000 Live Births, 1917-1940.



Causes of Deaths under 1 year.

Causes of Deaths.				Neo-Natal; Deaths under 1 month.	Deaths 1 month and under 1 year.	Total	Percentage of Total Infant Mortality.
<i>Ante-Natal Causes :</i>							
Congenital Debility	...	...	...	43	9	52	
Prematurity	...	...	...	40	5	45	
Malnutrition	...	...	...	2	12	14	
Marasmus	...	...	...	—	13	13	
Congenital Syphilis	...	...	...	1	3	4	
Anaemia	...	...	...	1	2	3	
Spina Bifida	...	...	...	1	1	2	
Congenital Heart Disease	...	...	...	—	1	1	
Congenital Pyloric Stenosis	...	...	...	—	1	1	
Blood Dyscrasia	...	...	...	1	—	1	
Inguinal Hernia	...	...	...	—	1	1	
Total	...	...	...	89	48	137	47.08
<i>Intra-Natal Causes :</i>							
Cerebral Haemorrhage	...	...	...	9	—	9	
Neo-Natal Haemorrhage	...	...	...	4	—	4	
Atelectasis	...	...	...	3	1	4	
Asphyxia Neonatorum	...	...	...	4	—	4	
Umbilical Haemorrhage	...	...	...	1	—	1	
Protracted Labour	...	...	...	1	—	1	
Total	...	...	...	22	1	23	7.90
<i>Post-Natal Causes :</i>							
Diarrhoea and Enteritis	...	...	...	7	46	53	
Pneumonia	...	...	...	4	22	26	
Bronchitis	...	...	...	1	16	17	
Icterus Neonatorum	...	...	...	4	—	4	
Convulsions	...	...	...	—	3	3	
Meningitis	...	...	...	1	2	3	
Pulmonary Congestion	...	...	...	—	2	2	
Dysentery	...	...	...	—	2	2	
Colitis	...	...	...	—	2	2	
Pulmonary Tuberculosis	...	...	...	—	3	3	
Miliary Tuberculosis	...	...	...	—	1	1	
Enteric Fever...	...	...	...	—	1	1	
Intermittent Fever	...	...	...	—	1	1	
Pulmonary Infarction	...	...	...	—	1	1	
Avitaminosis	...	...	...	—	1	1	
Scurvy-Rickets	...	...	...	—	1	1	
Sepsis of Umbilical Cord	...	...	...	—	1	1	
Toxaemia, Thrush	...	...	...	—	1	1	
Tetanus Neonatorum	...	...	...	1	—	1	
Abscess of Neck	...	...	...	—	1	1	
Encephalitis	...	...	...	—	1	1	
Myocarditis	...	...	...	—	1	1	
Suspected Poisoning	...	...	...	—	1	1	
Total	...	...	...	18	110	128	43.99
<i>Ill-Defined Causes :</i>							
Neo-Natal Death	...	...	...	1	—	1	
Unknown	...	...	...	2	—	2	
Total	...	...	...	3	—	3	1.03
Grand total	...	...	...	132	159	*291	

* M. 173, F. 118.

Duration of Life of Infants dying under one year of Age.

Duration of Life.	No. of infants.	Percentage of total deaths under 1 year.	Corresponding percentage, 1939.
Under 1 day	12	4.12	5.78
1 day and under 1st week ...	82	28.18	29.75
1st week and under 1 month ...	38	13.06	14.88
Total under one month ...	132	45.36	50.41
1 month to 3 months	52	17.87	15.70
Over 3 to 5 months	38	13.06	6.20
„ 5 to 7 do.	24	8.25	11.98
„ 7 to 9 do.	31	10.65	8.68
„ 9 to 11 do.	14	4.81	7.03
„ 11 months and under 1 year ...	—	—	—
Total	291	—	—

Neo-Natal Mortality (Deaths under 1 month), 1930-40.

Period.	No. of Deaths under 1 month.	Percentage of Total Deaths under 1 year.	Neo-Natal Mortality Rate per 1,000 Births.
Yearly Average: 1930-34 ...	90.6	38.60	44.03
Year 1935	91	50.28	39.24
1936	61	40.94	26.58
1937	110	46.41	48.39
1938	117	57.35	45.16
1939	122	50.41	44.33
Average 1935-39... ..	100.2	49.08	40.74
Year 1940	132	45.36	44.94

The Pre-school Child.

An analysis of the causes of death of those children between one and five years of age that died during the year under report show that, out of a total of fifty-nine (59) deaths, seventeen (17) were attributable to communicable diseases and five (5) to diseases which must have affected the infant during the ante-natal period.

Causes of Death at Ages 1-5.

	Group Total.	Percentage of Total Mortality at Ages 1-5.
<i>Diseases, &c., attributable to Ante-Natal Causes:</i>		
Congenital Folds of Urethra 1, Congenital Syphilis 1, Malnutrition 1, Marasmus 2	5	8.47
<i>Communicable Diseases:</i>		
Diphtheria 2, Enteric Fever 2, Malaria 2, Pneumonia 8, Tuberculosis 3	17	28.81
<i>Diseases of the Nervous System:</i>		
Cerebral Congestion 1, Cerebral Diplegia 1, Convulsions 4, Meningitis 1	7	11.86
<i>Diseases of the Respiratory System:</i>		
Bronchitis 5, Lung Abscess 1, Pulmonary Congestion 4	10	16.95
<i>Diseases of the Digestive System:</i>		
Ascariasis 1, Cirrhosis of Liver 1, Colitis 1, Diarrhoea and Enteritis 8, Thrush 1	12	20.34
<i>Other Causes:</i>		
Endocarditis 1, Fractured Skull 1, Hyperpiesia 1, Nephritis 1, Osteomyelitis 1, Sarcoma of Urachus 1, Scalds 1, Toxaemia 1 ...	8	13.56
Total	*59	—

* M. 38, F. 21.

Chart D
Port-of-Spain
Percentage of ANTE-NATAL GROUP to TOTAL DEATHS of
Infants under 1 year, 1930-1940.

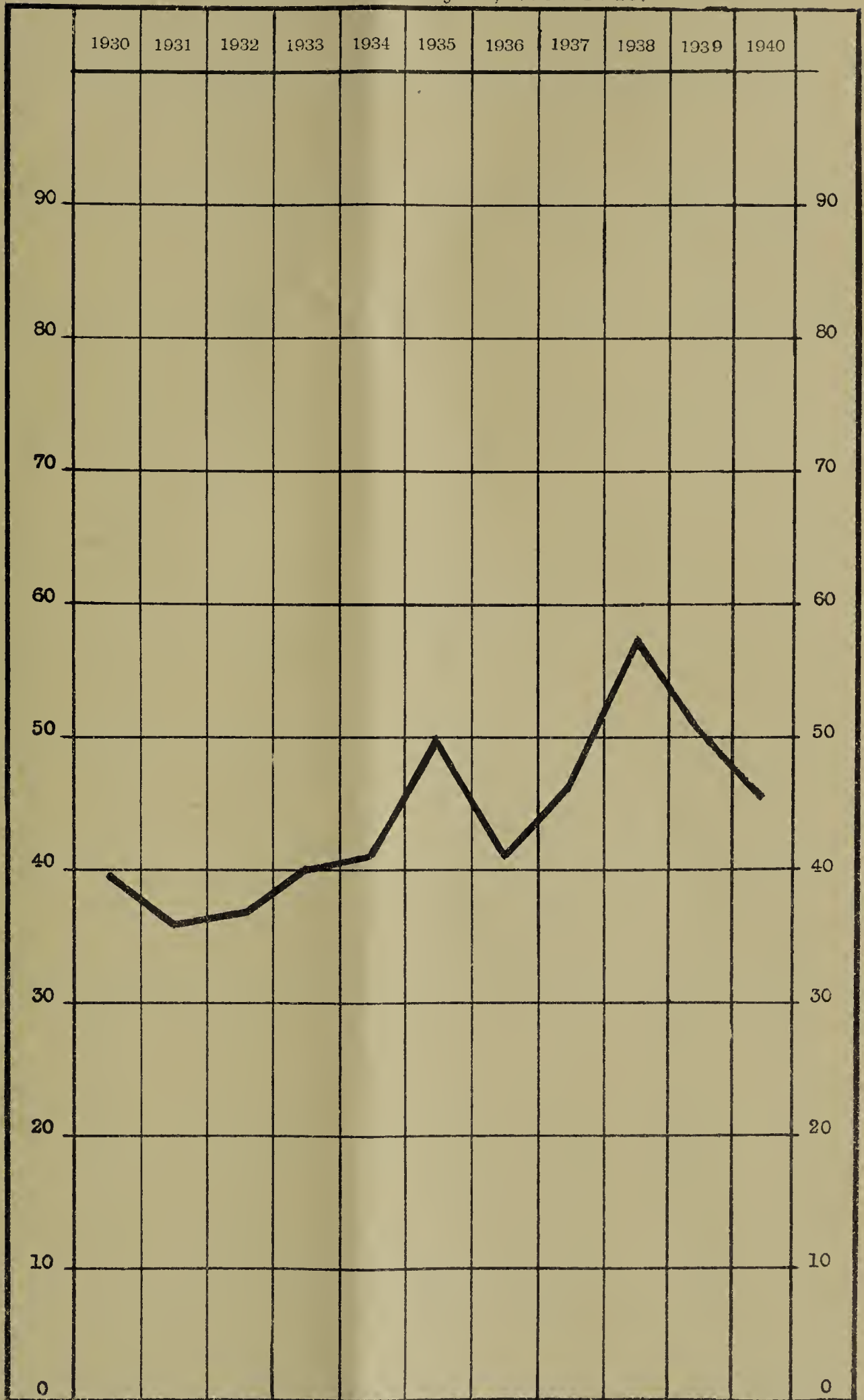
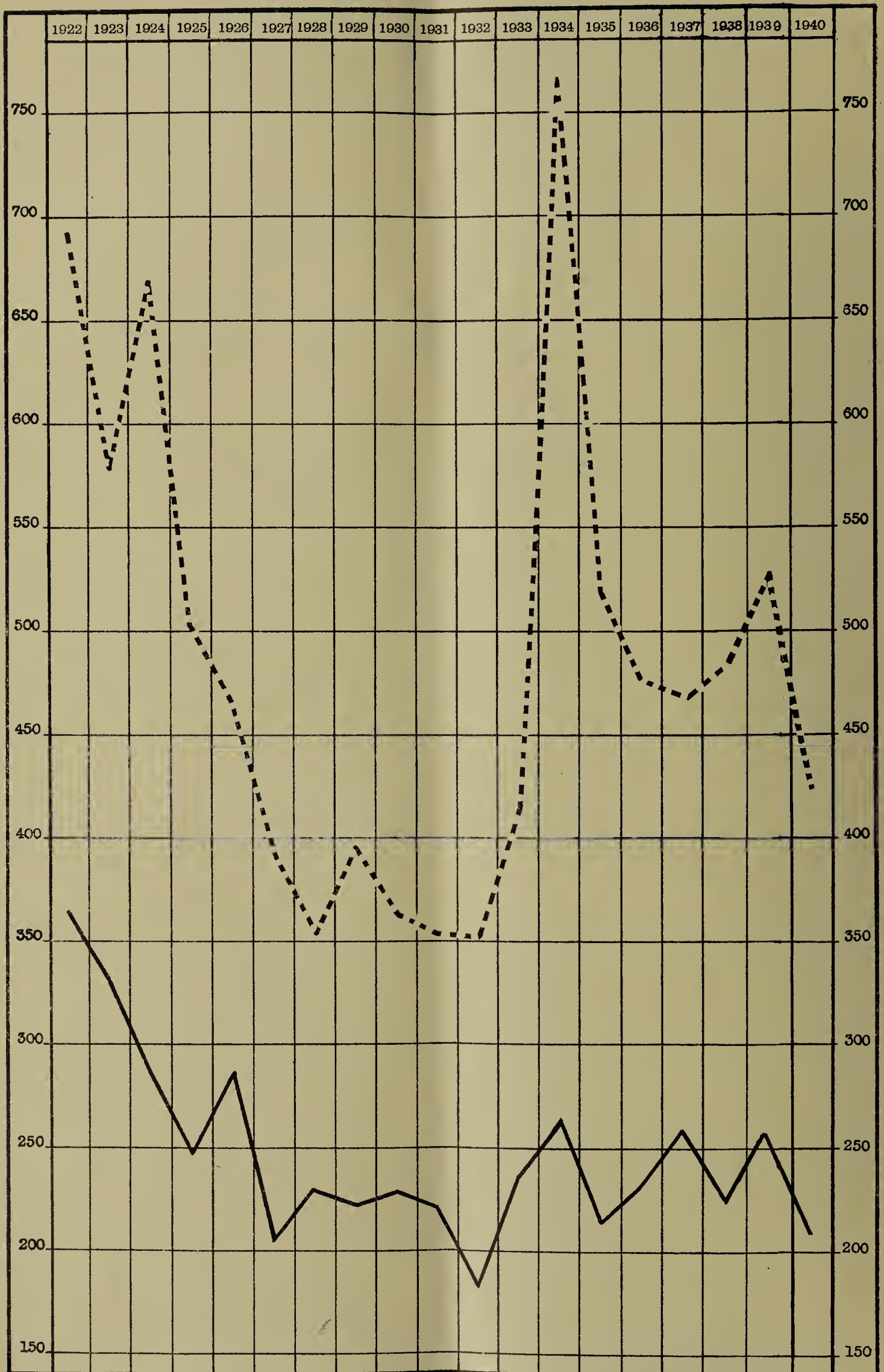


Chart E
Port-of-Spain

INFECTIOUS DISEASES—Notifications and Deaths, 1922-1940.



----- NOTIFICATIONS.
———— DEATHS

MATERNAL MORTALITY.

The figures tabulated hereunder are an improvement on those that represent the average for the previous decade.

Puerperal sepsis was responsible for the death of three (3) mothers, and Haemorrhage claimed (some) victims also.

Causes of Maternal Deaths.

Causes of Maternal Deaths.	15 and under 20.	20 and under 25.	25 and under 30.	30 and under 35.	35 and under 40.	40 and upwards.	Total All Ages.	Rate per 1,000 Births.	
								1940.	Average 1935-39.
Puerperal Sepsis ...	—	2	—	1	—	—	3	1.02	0.74
Eclampsia ...	1	—	1	—	—	—	2	0.68	1.57
Haemorrhage ...	—	—	—	2	1	—	3	1.02	0.55
Pernicious Vomiting ...	—	—	—	—	—	—	—	—	0.25
Other Causes * ...	—	3	—	1	—	—	4	1.36	2.69
Total ...	1	5	1	4	1	—	12	4.09	5.81

* Other Causes include: Ectopic Gestation, Parametritis following Parturition, Difficult Labour, Perforated Uterus.

PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASES.**Notifiable Infectious Diseases.**

Four hundred and twenty-three cases (423) of notifiable infectious diseases were reported to the Public Health Department during 1940, of which one hundred and fifty-five (155) were cases of Pulmonary Tuberculosis, seventy (70) of Enteric Fever, sixty-nine (69) of Pneumonia and fifty-eight (58) of Chicken Pox.

These were 104 less than the number notified last year.

Deaths numbered 208 as compared with 259 for the year 1939, 118 deaths were certified to Pulmonary Tuberculosis, 63 to Pneumonia and 11 to Enteric Fever.

Sixty-nine (69) notifications of Pneumonia were received at the Department; on the other hand the returns from the Registrars of the various sub-districts of the City showed that 63 deaths were certified to Pneumonia, giving a mortality rate of nearly 100 per cent. This is obviously an incorrect figure as the death rate of the usual type of cases which are prevalent in the City is about 30 to 40 per cent. even 50 per cent. There having been no unusual frequency of the more fatal type of pneumonia during the year under review and the disease certainly not having occurred in epidemic form, the explanation must surely be that only a certain proportion of cases of pneumonia are being notified, a state of affairs which cannot be considered satisfactory if the control measures of isolation and current disinfection are to be instituted at the earliest possible opportunity.

These conclusions are equally applicable, though to a lesser degree, to all the notifiable infectious diseases and practitioners are entreated to co-operate still more closely with the Department by notifying, at the earliest possible opportunity, all cases of infectious diseases that have been declared notifiable.

Infectious Diseases—Notifications and Deaths—1930 to 1940.

Infectious Diseases.	NOTIFICATIONS.				DEATHS.			
	Average 1930-34.	Average 1935-39.	1939.	1940.	Average 1930-34.	Average 1935-39.	1939.	1940.
Diphtheria ...	34	29.2	61	37	1.6	3	2	2
Enteric Fever ...	47	57.8	75	70	13.2	12.6	15	11
Pulmonary Tuberculosis ...	141.4	146.2	175	155	128.2	133	167	118
Tuberculosis (Other forms) ...	16.4	9.2	13	9	12.4	11	15	14
Pneumonia ...	113.6	138.2	107	69	70	77.4	59	63
Ophthalmia Neonatorum ...	28.2	25.4	23	25	—	0.2	1	—
Chicken Pox ...	66.6	84.6	72	58	—	—	—	—
Encephalitis Lethargica ...	0.2	0.2	—	—	0.4	—	—	—
Acute Poliomyelitis ...	1.6	3.2	1	—	0.6	0.2	—	—
Total ...	449	494	527	423	226.4	237.4	259	208
Rate per 1,000 population ...	6.29	6.17	5.83	4.58	3.18	2.96	2.87	2.25

Distribution of Cases and Deaths from Notifiable Infectious Diseases.

Diseases.	City Proper.		St. Clair		East Dry River		Belmont		Woodbrook		St. James	
	Cases notified.	Deaths	Cases notified.	Deaths	Cases notified.	Deaths	Cases notified.	Deaths	Cases notified.	Deaths	Cases notified.	Deaths
Diphtheria ...	6	...	1	...	8	...	14	...	8	2	...	...
Enteric Fever ...	16	3	...	...	16	4	12	1	7	1	19	2
Pulmonary Tuberculosis ...	55	39	1	...	36	29	38	28	10	11	15	11
Tuberculosis (Other forms) ...	2	4	...	...	2	3	1	3	...	1	4	3
Pneumonia (All forms) ...	20	20	...	1	28	21	16	11	2	5	3	5
Ophthalmia Neonatorum ...	5	...	...	...	9	...	8	...	3	...	...	...
Chicken Pox ...	24	...	2	...	12	...	9	...	8	...	3	...
Total ...	128	66	4	1	111	57	98	43	38	20	44	21
Rate per 1,000 population in each sub-district	3.85	1.98	2.60	0.65	5.62	2.89	6.29	2.76	3.30	1.74	4.13	1.97

Notifiable Infectious Diseases—Home and Hospital Deaths.

Diseases.	Died at Home.	Died at Hospital.	Total Deaths.	Percentage of cases isolated in Hospital before death.	Corresponding percentage for the year 1939
Diphtheria ....	...	2	2	100.00	100.00
Enteric Fever	1	10	11	90.91	93.33
Pulmonary Tuberculosis	48	70	118	59.32	64.07
Tuberculosis (other forms)	5	9	14	64.29	80.00
Pneumonia	35	28	63	44.44	54.24
Ophthalmia Neonatorum ...	...	...	...	...	100.00
Total	89	119	208	57.21	64.86

NON-NOTIFIABLE INFECTIOUS DISEASES.

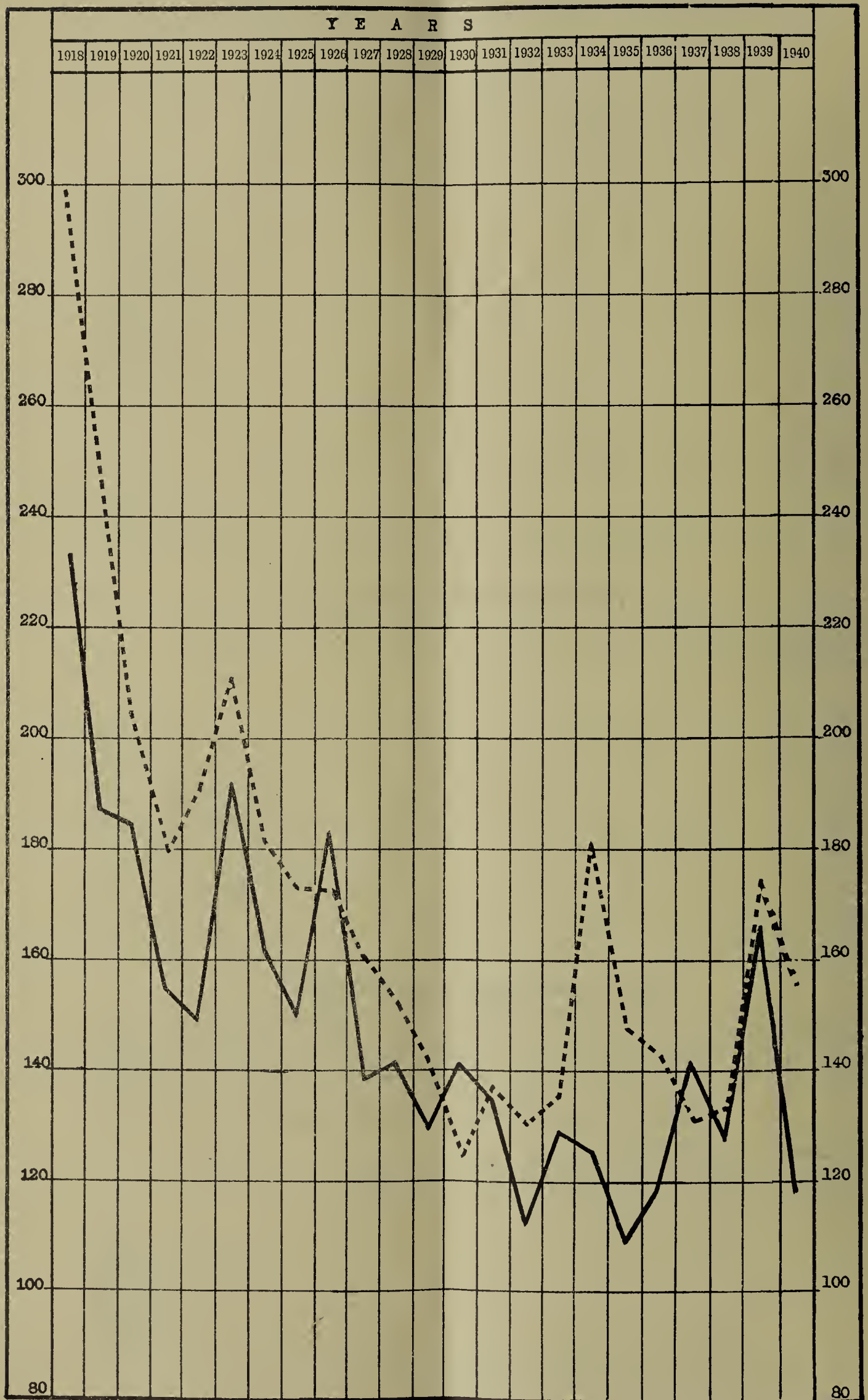
Sixty-seven deaths certified to the non-notifiable infectious diseases figured in the returns during 1940 as against fifty-two in 1939. Thirty-five were due to syphilis, eighteen to malaria and nine to dysentery. The increase over the corresponding figure for last year is due to an increase in the number of deaths from syphilis (35 as against 26) and also in those certified to dysentery (9 as against 2).

Non-Notifiable Infectious Diseases—Home and Hospital Deaths.

Diseases.	Died at Home &c.	Died at Hospital.	Total Deaths.	Percentage of cases isolated in Hospital before death.	Corresponding percentage for the year 1939.
Malaria	11	7	18	38.89	42.11
Black Water Fever .. ..	..	1	1	100.00	..
Whooping Cough .. ..	..	..	..	..	..
Influenza	1	..	1	..	..
Dysentery	5	4	9	44.44	100.00
Ankylostomiasis	1	2	3	66.67	..
Syphilis	23	12	35	34.29	37.14
Total	41	26	67	38.80	32.69

Chart F
Port-of-Spain

PULMONARY TUBERCULOSIS—Notifications and Deaths, 1918-1940.



..... NOTIFICATIONS.
—— DEATHS.

TUBERCULOSIS.

Pulmonary Tuberculosis continues to take a heavy toll of life, being third in the list of causes of death with one hundred and eighteen deaths to its credit. As compared with 1939, when one hundred and seventy-five notifications were received and one hundred and sixty-seven deaths recorded, the situation (155 notifications and 118 deaths) has shown some improvement but this is far too high a price to pay for a disease which, quite definitely, has not so far, in this Colony, been tackled with the vigour and energy that it demands, nor with the weapons and facilities that are available to workers in countries abroad.

The sufferer from Tuberculosis is in a pitiable plight, as under conditions now obtaining, all that can be done for him is in the nature of palliatives and his demise in two years from the date of the diagnosis of his complaint is a foregone conclusion.

The war has quite definitely had an adverse effect on the preparations which were practically complete for the erection of a sanatorium on a site which has already been chosen.

Up to the time of writing work has not yet commenced and, with the existing difficulties in the obtaining of steel and iron, it looks as if all plans in this respect will have to be postponed until the cessation of hostilities.

In the meantime the routine measures of notification and isolation of cases, detection and examination of contacts, disinfection of premises, &c., continue.

Two factors which are likely to have an ameliorative effect are : (a) the progressive elimination of the barrack system and the gradual replacement of insanitary and congested housing accommodation in the worst parts of the City by a better type of house with the necessary open spaces prescribed by the Building Regulations and (b) the general raising of the economic level which has been taking place gradually during the past few years.

Pulmonary Tuberculosis—Age Grouping of Notifications and Deaths.

Ages.				Notifications.	Deaths.	Percentage of Deaths from Pulmonary Tuberculosis to Deaths from all causes.
Under 1 year	...	...	...	2	3	1.03
1-10 years	...	...	...	1	—	—
11-20 do.	...	...	...	22	20	31.25
21-30 do.	...	...	...	56	30	30.00
31-40 do.	...	...	...	26	23	18.11
41-50 do.	...	...	...	19	11	6.75
51-60 do.	...	...	...	21	17	9.34
Over 60 years	...	...	...	8	14	2.48
Total	...	...	...	155	118	7.53

Pulmonary Tuberculosis—Notifications and Deaths, 1918-40.

Period.				Notifications.	Deaths.	Death Rate per 1,000 pop.
Year 1918	...	...	...	299	233	3.43
Yearly Averages :						
1919-23	...	...	...	207	173.2	2.65
1924-28	...	...	...	167.6	154.6	2.38
1929-33	...	...	...	133.6	129	1.85
Average 1919-33	...	...	...	169.4	152.3	2.29
Year 1934	...	...	...	181	125	1.71
1935	...	...	...	148	109	1.47
1936	...	...	...	143	119	1.57
1937	...	...	...	131	142	1.84
1938	...	...	...	134	128	1.52
Average 1934-38	...	...	...	*147.4	124.6	1.62
Year 1939	...	...	...	175	167	1.85
1940	...	...	...	155	118	1.28

Non-Pulmonary Tuberculosis.

Of the deaths under this heading eight (8) were attributable to Miliary Tuberculosis, 3 of which latter were discovered only on the post mortem table ; Tuberculous Meningitis claimed two victims.

Non-Pulmonary Tuberculosis—Forms, Notifications and Deaths.

Ages.	Forms.	Notifications.	Deaths.
Under 1 year	... Miliary Tuberculosis ...	1	1
1- 5 years	... do. do. ...	2	2
Do. do.	... Tuberculous Meningitis ...	1	1
11-15 do.	... Tuberculous Adenitis ...	1	—
16-20 do.	... Tuberculous Meningitis ...	—	1
Do. do.	... Tuberculosis of Hip ...	—	1
Do. do.	... Miliary Tuberculosis ...	2	2
21-25 do.	... do. do. ...	—	1
26-30 do.	... Tuberculous Peritonitis ...	1	1
31-36 do.	... Tuberculosis of Spine ...	1	—
36-40 do.	... Miliary Tuberculosis ...	—	1
46-50 do.	... Tuberculosis of Pleura ...	—	1
51-55 do.	... do. do. ...	—	1
Do.	... Miliary Tuberculosis ...	—	1
Total ...		9	14

Deaths from Non-Pulmonary Tuberculosis 1924-40.

Period.	Deaths.	Rate per 1,000 population.
Yearly Averages :		
1924-28 ...	15	0.23
1929-33 ...	15.2	0.22
1934-38 ...	10	0.13
Average 1924-38	13.4	0.19
Year 1939 ...	15	0.17
1940 ...	14	0.15

ENTERIC FEVER.

It is true to say that a very close watch is kept on the incidence and mortality of this disease as it occurs in the Urban Sanitary District and that, because it does furnish some sort of index of the general level of sanitation that has been attained and of the success of the measures directed towards maintaining the essential services at a high level of efficiency.

If the water supply is subject to contamination, if there is no proper and efficient system of disposal of excreta, if the food of man is vitiated by frequent contact with flies, dust and dirt, to such an extent will these happenings be reflected in the incidence and mortality of enteric fever in the district.

In this City, I believe, from what I have seen of it, that enteric fever is an infectious disease that can be considered " well notified ".

I am positive that there are few cases of enteric fever that escape notification and it is no uncommon thing for a case to be notified as enteric fever, only to be given another label later on, when the subsequent course of the case makes the disease-process more certain ; whereas the reverse is hardly ever known to occur.

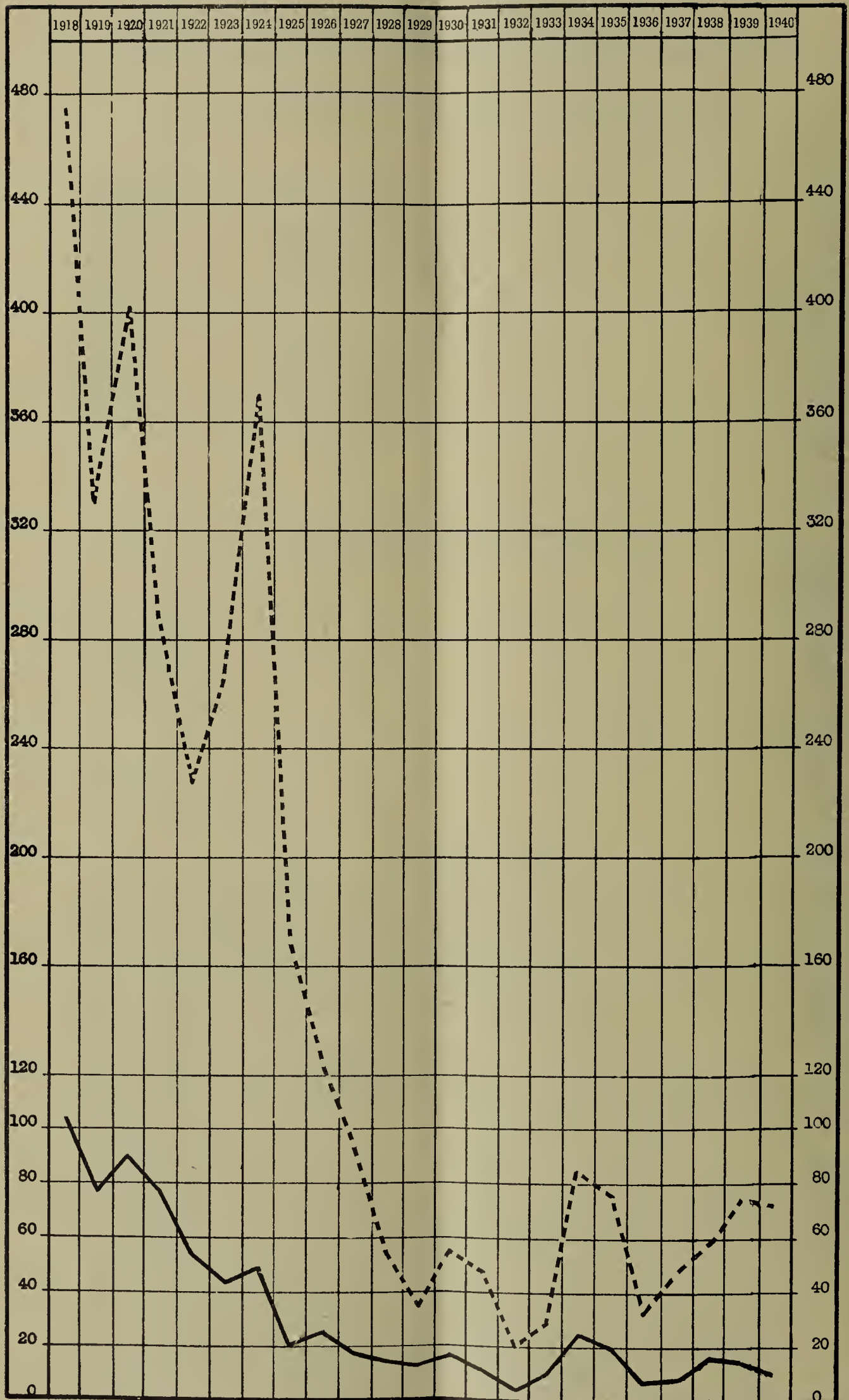
Again fairly complete and minute investigations are made in respect of each and every case of enteric fever that is made known to the Department either by way of notification or, very occasionally, by its appearance in the death returns. Careful inquiry is made as to the particular place where the infection was acquired and as to the probable source and vehicle of contamination and, of course, all cases which are found to have commenced their illness in the country or to have acquired their infection from a definite contaminating source in the country are carefully excluded. from the statistics, even though the address given is a City one, as not infrequently happens. During the year under review seventy cases of enteric fever were notified and (11) eleven deaths recorded as compared with seventy five and fifteen in 1939, giving a death rate per 1,000 population of .12 and .17, respectively. Fifty-one (51) of these cases were in persons under 20 years of age and sixty-one (61) in persons under 30 years of age. In fact the disease is predominantly of the so-called " juvenile type ", 27 cases occurring in youngsters under 10.

This is a normal state of affairs for the City and one that has been apparent for the last ten (10) years.

Chart G

Port-of-Spain

ENTERIC FEVER—Notifications and Deaths, 1918-1940.



..... NOTIFICATIONS.

———— DEATHS.

Enteric Fever.

Notifications and Deaths, 1918-40.

Period.	Notifications.	Deaths.	Death rates per 1,000 pop.
Year 1918	495	104	1.52
Yearly Averages :			
1919-23	301.8	67.8	1.03
1924-28	162.4	25.2	0.39
1929-33	37	10.8	0.16
Average 1919-33...	100.2	20.8	0.32
Year 1934	85	25	0.34
1935	76	19	0.26
1936	32	6	0.08
1937	47	7	0.09
1938	59	16	0.19
Average 1934-38...	59.8	14.6	0.19
Year 1939	75	15	0.17
1940	70	11	0.12

Enteric Fever, 1940—Age Distribution of Notifications and Deaths.

Ages.	Notifications.	Deaths.
Under 1 year	2	1
1-10 years	27	5
11-20 do.	24	2
21-30 do.	10	1
31-40 do.	4	2
41-50 do.	1	—
51-60 do.	1	—
Over 60 years	1	—
Total	70	11

Inoculation of Enteric Fever contacts.

Contacts are ferreted out and offered inoculation which is hardly ever refused. If a barrack yard happens to be seat of occurrence of the case, the whole barrack yard population is inoculated.

Inoculation of Enteric Fever Contacts.

T.A.B. Injections.

No. receiving one injection.	No. receiving two injections.	Total.
102	36	138

PNEUMONIA.

Sixty-nine cases of Pneumonia were notified during the year under report and sixty-three deaths recorded. Twenty-nine of the notifications and thirty-seven of the deaths were in children under ten years of age.

I have already, earlier in the report, commented on this apparently very high mortality—the fact is that many cases of this disease escape notification.

Even though the measures at our disposal for prevention and control do not, in view of the nature of the infecting agent and of its method of spread, carry the same conviction as is the case with some other infectious diseases, yet an early notification of a case means, very often, the early removal of the case to Hospital and the early institution of specific treatment which may make all the difference between the recovery or death of the patient.

Pneumonia (All Forms).

Notifications and Deaths, 1922-40.

Period.	Notifications.	Deaths.	Death Rate per 1,000 pop.
Yearly Averages :			
1922-26	111.8	78	1.23
1927-31	69.8	53.4	0.79
1932-36	155.4	80.6	1.10
Average 1922-36... ..	112.3	70.7	1.04
Year 1937	125	85	1.10
1938	101	70	0.83
1939	107	59	0.65
1940	69	63	0.68

Pneumonia—Notifications and Deaths according to Age.

Ages.	Notifications.	Deaths.
Under 1 year	8	26
1-10 years	21	11
11-20 do.	6	1
21-30 do.	7	2
31-40 do.	10	2
41-50 do.	8	6
51-60 do.	5	5
Over 60 years	4	10
Total	69	63

DIPHTHERIA.

Thirty-seven (37) cases as against sixty-one (61) in 1939 were notified in 1940. The number of deaths certified to this disease was two (2).

Diphtheria.

Notifications and Deaths, 1917-40.

Period.	Notifications.	Deaths.	Death Rate per 1,000 pop.
Yearly Averages :			
1917-21	11.8	1.4	0.02
1922-26	14.8	2	0.03
1927-31	23.8	1.6	0.02
1932-36	29.8	2.2	0.03
Average 1917-36... ..	20	1.8	0.03
Year 1937	30	4	0.05
1938	16	3	0.04
1939	61	2	0.02
1940	37	2	0.02

Diphtheria, 1940.—Notifications and Deaths according to Age.

Ages.	Notifications.	Deaths.
Under 1 year	1	—
1-10 years	25	2
11-20 do.	7	—
21-30 do.	3	—
31-40 do.	1	—
	37	2

CHICKEN POX.**Age Distributions of Notifications.**

Ages.			Notifications.	Ages.			Notifications.
Under 1 year	...	...	—	31-40 years	...	...	5
1-10 years	...	...	15	41-50 do.	...	...	3
11-20 do.	...	...	21	51-60 do.	...	...	1
21-30 do.	...	...	12	Over 60 years	...	...	1
				Total	...	...	58

No case of **Acute Poliomyelitis (Infantile Paralysis)**, none of **Encephalitis Lethargica**, or of **Paralytic Rabies** was notified to the Department during the year. No case of quarantinable disease occurred either in the City or in the rest of the Colony.

ACUTE ANTERIOR POLIOMYELITIS.
Notifications of Acute Anterior Poliomyelitis, 1927-40.

Year.	No. of Cases.	Year.	No. of Cases.	Year.	No. of Cases.
1927-29	...	1933-35	...	1939	1
1930	5	1936	3	1940	...
1931	...	1937	10		
1932	3	1938	2		

NON-NOTIFIABLE INFECTIOUS DISEASES.**MALARIA.**

The question is often asked: Is malaria very prevalent in the City of Port-of-Spain?

If by that question is meant: How many people get infected with the malaria parasite by malaria-carrying mosquitoes within the limits of the City, the answer must certainly be very few, perhaps not more than a dozen or two in any one year and, when infection does take place, almost invariably those infected are inhabitants of the periphery where anopheline mosquitoes from adjoining malaria infested districts are to be found.

It is quite another question to ask "How many cases of malaria can be found at any one time in the City?", as it is no uncommon thing for cases from the country to come or to be brought to the City for treatment and among the residents may be found many an old case from the country which has taken up residence in the City as a means of escape from chronic recurring infection in areas where malaria is endemic. This latter type of case is subject to recurring acute attacks whenever some debilitating influence has had the effect of lowering the resistance for the time being.

Malaria not being a notifiable disease, it is not possible to say, with certainty, how many cases reside in the City but as far as it is possible to do so, every case brought to the notice of the Public Health Department and, certainly, every recorded death is investigated by Sanitary Inspectors who make it their business to ascertain, as far as possible, the source of infection and who make a survey of the immediately surrounding district for anopheline mosquitoes and their possible breeding places.

As a result of these investigations, carried out over a period of years, I am in a position to state again that very few cases are actually infected within the limits of the City.

In the returns which were sent to the Public Health Department by the Registrars of the various sub-districts of the City during 1940, eighteen deaths were certified to malaria.

Deaths from Malaria according to Age.

Ages.			Deaths.	Ages.			Deaths.
Under 1 year	...	...	1	31-40 years	...	...	3
1-10 years	...	...	2	41-50 do.	...	...	—
11-20 do.	...	...	2	51-60 do.	...	...	2
21-30 do.	...	...	6	Over 60 years	...	...	2
				Total	...	...	18

Malaria—Local Distribution of Deaths.

Sub-districts.									Deaths.
City Proper	...	...	...	...	...	...	...	...	9
St. Clair	...	...	...	...	...	...	...	...	—
East Dry River	...	...	...	...	...	...	...	...	4
Belmont	...	...	...	...	...	...	...	...	3
Woodbrook	...	...	...	...	...	...	...	...	2
St. James	...	...	...	...	...	...	...	...	—
Total	...	...	...	...	...	...	...	...	18

SYPHILIS.

Syphilis, as a cause of morbidity and mortality and, in its general widespread effect on the public health, is certainly one of the most important diseases that affect the inhabitants of the Urban Sanitary District.

It is unfortunately the later or tertiary manifestations of the disease that are responsible for the mortality that is recorded and it is true to say that, as the aetiology of those morbid conditions, that affect the middle and old aged, is more and more clearly understood, syphilis is seen to play a greater and greater part.

In a sense it would seem that the nature of the disease is undergoing a change from the early florid type with open chancre and intense rash to a more obscure, retrocedent type with vascular and nervous manifestations as predominant signs.

And there are many who think that the existing practice of insufficient and perfunctory treatment in the early stages is responsible for the change that is being observed—an external syphilis that used to burn itself out in the early stages being now replaced by a syphilis that is concealed and lurks dangerously in the tissues only to attack, later on, the most vulnerable of these tissues, whenever the opportunity presents itself.

Surely it is a matter of urgent necessity that consideration be given to the various means and methods whereby the infected can be compelled to undergo regular and thorough treatment in the early stages of the disease, until the medical officer is satisfied that sufficiently complete treatment has been administered as to give a fairly reasonable certainty of clinical cure.

Deaths from Syphilis according to Age 1930-40.

Ages.					Average No. of Deaths. 1930-39.	No. of Deaths. 1940.
Under 1 year	...	...	...	...	5.1	4
1- 2 years	...	...	...	...	0.9	1
3- 5 do.	...	...	...	...	0.3	—
6-10 do.	...	...	...	...	0.2	1
11-20 do.	...	...	...	...	1.3	—
21-30 do.	...	...	...	...	3.6	3
31-40 do.	...	...	...	...	4.6	11
41-50 do.	...	...	...	...	3.5	7
51-60 do.	...	...	...	...	2.4	5
Over 60 years	...	...	...	...	1.9	3
Total	...	...	...	...	23.8	35
Rate per 1,000 pop.	...	...	...	...	0.31	0.38

DYSENTERY.

Dysentery is mainly a food or water-borne disease and is, to a certain extent, an index of the potability of water supply or of the purity and cleanliness of available foodstuffs, especially of those types that are eaten raw or uncooked such as green vegetables, fruits, &c.

During the rainy season and particularly, at the commencement of it, a certain number of cases crop up regularly each year.

It is not a notifiable disease and only a rough estimate of the incidence can be made from the deaths recorded.

Dysentery.**Deaths from the Dysenteries, 1918-40.**

Period.					Deaths.	Death Rates.
Year 1918	...	...	...	...	43	0.63
Yearly Averages :						
1919-23	...	...	...	...	38.2	0.58
1924-28	...	...	...	...	32	0.49
1929-33	...	...	...	...	14.8	0.21
1934-38	...	...	...	...	5.4	0.07
Average 1919-38	...	...	...	...	22.6	0.34
Year 1939	...	...	...	...	2	0.02
1940	...	...	...	...	9	0.10

DIARRHOEA AND ENTERITIS.

Seventy-three (73) deaths, of which fifty-three (53) were in infants under one year, were recorded in 1940.

It is a disease of filth, squalor and congestion and infants suffer most, most probably because of the relatively easy contamination of the principal article of food—milk—at this age.

As is to be expected the East Dry River District furnished the largest number of these cases.

During the year under review deaths from Diarrhoea and Enteritis constituted 18.2 per cent. of the infant mortality.

Deaths from Diarrhoea and Enteritis, 1918-40.

Period.					Deaths.	Death Rates.
Year 1918	...	...	...	...	193	2.84
Yearly Averages :						
1919-23	...	...	...	...	143.6	2.18
1924-28	...	...	...	...	72.8	1.12
1929-33	...	...	...	...	52.8	0.76
1934-38	...	...	...	...	40	0.52
Average 1919-38	...	...	...	...	77.3	1.15
Year 1939	...	...	...	...	45	0.50
1940	...	...	...	...	73	0.79

Diarrhoea and Enteritis—Deaths according to Age.

Ages.		Deaths.	Ages.		Deaths.
Under 1 year	...	53	31-40 years	...	1
1-10 years	...	8	41-50 do.	...	2
21-30 do.	...	2	Over 60 years	...	7
			Total	...	73

Diarrhoea and Enteritis—Deaths in Sub-districts.

Sub-district.					No. of Deaths.
City Proper	...	...	...	...	20
St. Clair	...	...	...	...	—
East Dry River	...	...	...	...	27
Belmont	...	...	...	...	13
Woodbrook	...	...	...	...	3
St. James	...	...	...	...	10
Total	...	...	...	...	73

OTHER PRINCIPAL CAUSES OF DEATH.

Cardiac and Vascular Diseases.

Cardiac and vascular diseases occupied second place on the list of causes of deaths during 1940, claiming 210 victims out of a total of 1,568.

Many of these cases would, on careful analysis, be found to be the later manifestations of syphilitic infection acquired earlier in life and which was not subjected to thorough and complete treatment.

Deaths from Cardiac and Vascular Diseases in Age Groups.

FORMS.	0-10 years.	11-20 years.	21-30 years.	31-40 years.	41-50 years.	51-60 years.	Over 60 years.	Total
<i>Diseases of Arteries and Valves :</i>								
Aneurism ...	...	...	2	2	6	3	7	20
Arterio-Sclerosis and Atheroma ...	...	...	1	1	2	1	25	30
Coronary Thrombosis ...	...	...	...	1	5	2	5	13
Mitral and Aortic Incompetence ...	...	1	...	5	5	6	7	24
Other Diseases of Arteries and Valves ...	1	...	1	2	2	4	7	17
<i>Diseases of the Heart :</i>								
Myocardial Degeneration ...	...	...	...	2	1	8	27	38
Myocarditis ...	1	2	1	2	4	3	9	22
Endocarditis ...	2	1	1	1	...	1	1	7
Pericarditis ...	1	...	...	1	1	...	1	4
Fatty Degeneration ...	1	...	1	2	...	...	2	6
Aneurism of Ventricle ...	...	...	...	...	...	...	1	1
Angina Pectoris ...	...	...	...	...	2	1	1	4
Auricular Fibrillation ...	...	...	1	...	...	2	...	3
Other Cardiac Diseases ...	1	...	1	4	5	6	4	21
Total ...	7	4	9	23	33	37	97	210

Cerebral Haemorrhage, Bronchitis, Nephritis.

Deaths according to Age.

Ages.	Cerebral Haemorrhage. No. of Deaths.	Bronchitis No. of Deaths.	Nephritis. No. of Deaths.
Under 1 year ...	9	17	...
1-10 years ...	...	6	1
11-20 do. ...	...	...	3
21-30 do. ...	3	1	4
31-40 do. ...	6	2	14
41-50 do. ...	12	3	12
51-60 do. ...	16	2	11
Over 60 years ...	25	13	38
Total ...	71	44	83

CANCER AND OTHER MALIGNANT DISEASES.

Ever since it became possible, with the establishment of the City Council as the Local Authority for the Urban Sanitary District of the City of Port-of-Spain, to keep an accurate record of returns of deaths, it has been noticed that deaths from cancer and other malignant diseases have shown a steady increase from year to year for reasons which are by no means quite clear.

It is true that progress in preventive and curative medicine, coupled with improved economic and social conditions, has enabled a much larger population to arrive at those age-periods at which cancer is more prevalent but that does not seem the complete explanation and much more still remains to be discovered in connection with this disease.

Preventive measures amount to practically nil and the only hope at the moment for the afflicted is in early diagnosis and in early radical treatment of the disease.

Cancer and Other Malignant Diseases.—Forms, Sites and Deaths.

Forms and Sites.						DEATHS.	
						Males.	Females.
<i>Carcinoma :</i>							
Jaw, Mouth, Tongue, Throat	...	...	...	...	...	4	2
Oesophagus, Stomach, Pylorus	...	...	...	...	...	7	7
Liver, Pancreas	...	...	...	...	...	2	3
Small Intestine, Large Intestine, Rectum	...	...	...	...	...	4	3
Breast	...	...	...	...	...	1	6
Bladder, Urethra	...	...	...	...	...	—	2
Ovary, Uterus, Vulva	...	...	...	...	...	—	26
Prostate	...	...	...	...	...	2	—
Site not stated	...	...	...	...	...	—	1
<i>Sarcoma :</i>							
Ribs	...	...	...	...	...	—	1
Uterus	...	...	...	...	...	—	1
Urachus	...	...	...	...	...	*1	—
Site not stated	...	...	...	...	...	1	1
<i>Undefined Malignant Neoplasms :</i>							
Liver	...	...	...	...	...	1	1
Kidney	...	...	...	...	...	1	—
Total	...	...	...	...	...	24	54 = 78

* Aged 2 years.

Cancer, etc.—Ages at Death.

Ages.			No. of Deaths.	Ages			No. of Deaths.
0-10 years	...	...	1	51-60 years	...	...	16
31-40. do.	...	...	7	61-70 do.	...	...	18
41-50 do.	...	...	18	Over 70 years	...	...	18
				Total	...	...	78

Deaths from Cancer and other Malignant Diseases, 1918-40.

Period.						Deaths.	Rate per 1,000 pop.
<i>Yearly Averages :</i>							
1918-22	...	...	...	...	...	44.4	0.67
1923-27	...	...	...	...	...	45.6	0.71
1928-32	...	...	...	...	...	44.6	0.65
1933-37	...	...	...	...	...	56.8	0.76
Average 1918-37	...	...	...	...	...	47.9	0.70
Year 1938	...	...	...	...	...	70	0.83
1939	...	...	...	...	...	76	0.84
1940	...	...	...	...	...	78	0.85

SANITARY ADMINISTRATION.

There was a slight reduction in the number of the temporary staff of the Public Health Department during the year under review, an attempt being made to get more and better work, through more thorough and efficient supervision by responsible overseers and drivers, rather than by an increase in personnel.

The number of the temporary staff totalled eighty-five (85)—fifteen (15) drivers, six (6) specials and sixty-four men (64).

A change that was instituted and, which seemed to work well, was that the Special Sanitary Inspector in charge of the control of Infectious Diseases was given supervision and control of all units engaged in disinfection, whether they be cesspits, pools or premises.

Disinfection.

Premises, &c. disinfected for Infectious Diseases and Vermin.

Diseases.					Premises sprayed.	Railway Coaches sprayed.
Tuberculosis	...	...	...	...	140	...
Enteric Fever	...	...	...	...	64	...
Pneumonia	...	...	...	...	45	...
Diphtheria	...	...	...	...	29	...
Chicken Pox	...	...	...	...	31	...
Ophthalmia Neonatorum	...	...	...	...	16	...
Leprosy	...	...	...	...	...	18
Total	...	...	...	...	325	18
Vermin	...	...	...	...	352	...

Inspection of Premises, &c., by Sanitary Inspectors.

Average Monthly No. of Visits to Dwellings, Shops and other Premises ... 8,340

Inspection of Stores, Shops, &c.

				Average Monthly No. of Visits.					Average Monthly No. of Visits.
Provision and Meat Shops	...	...	...	222	Sweet Drink Carts	...	...	...	32
Provision Stores	...	...	...	25	Dairies and Cowsheds	...	...	...	73
Restaurants and Cookshops	...	...	...	44	Stables	...	...	...	63
Bakehouses	...	...	...	39	Goat Pens	...	...	...	79
Bread Depots	...	...	...	10	Aerated Water Factories	...	...	...	13
Cake and Ice Cream Shops	...	...	...	202	Soap Factories	...	...	...	2
Fry Shops	...	...	...	18	Other Factories	...	...	...	16
Hotels	...	...	...	7	Schools	...	...	...	26
Markets	...	...	...	9	Common Lodging Houses	...	...	...	6
Spirit Shops	...	...	...	33	Barber Shops	...	...	...	39
Ice Cream Carts and Pails	...	...	...	14	Dyeworks	...	...	...	6
Cake Trays and Baskets	...	...	...	74	Laundries	...	...	...	31
Provision Trays and Baskets	...	...	...	99	Garages	...	...	...	245
Bread Carts and Baskets	...	...	...	36	Tanneries	...	...	...	15
Fresh Fish Trays	...	...	...	67	Public Urinals	...	...	...	14
Oyster Vendors' Baskets	...	...	...	5	Boats	...	...	...	...
Plantain Carts	...	...	...	4					

Results of Notices and Verbal Directions.

				Con-structed or provided.	Repaired.	Cleansed.	Painted.	Elimi-nated.	Lime-washed.
Yard pavements	...	...	...	25	99	...	...	...	...
Depressions in yards	...	...	...	...	...	...	...	222	...
Yards	...	...	...	...	...	5,075	...	...	...
Drains, sinks, gullies, washing troughs, etc.	...	...	...	283	453	5,673	...	...	...
Lavatories, sewer basins, urinals, bath rooms, etc.	...	...	...	178	126	1,808	...	...	...
Privies	...	...	...	293	951	...	...	...	723
Cesspits	...	...	...	153	273	1,529	...	...	...
Manure Heaps	...	...	...	...	...	...	...	345	...
Rat Holes	...	...	...	...	...	...	...	158	...
Tree Shade, Overgrowths of bush	...	...	...	...	...	...	...	903	...
Dustbins	...	...	...	1,618	388	1,565	...	...	...
Dustbin covers	...	...	...	823	...	...	...	...	...
Shops, Parlours, Restaurants, Bakehouses, Hotels, etc.	...	...	...	...	104	3,821	313	...	275
Aerated Water Factories	...	...	...	...	...	98	...	...	8
Bread Carts	...	...	...	...	...	...	14	...	...
Barracks, Common Lodging Houses	...	...	...	...	...	36	26	...	35
Garages, Kitchens	...	...	...	...	...	...	...	...	97
Cowsheds, Stables	...	...	...	...	34	170	...	...	97
Close-boarding, Ventilation of Houses	...	...	...	22	...	...	...	...	...

Reports to Water and Sewerage Department.

<i>Reports.</i>	<i>Total.</i>
Leaks, defective taps, chokes, &c.	604

Anti-Rabies Measures.

TRAPPING, &c., OF BATS.

No. of locations inspected for roosts of bats	40,593
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BATS CAUGHT.

Artibeus	612	
*Desmodus	—	
Hemiderma	13	
Molossus	100	
Noctilio Leporinus	38	
Saccopteryx	169	932
	—	

* Forty-five Desmodus bats were caught at Laventille, a district outside the eastern boundary of the City.

Building Plans, &c.

Reports made by the Public Health Department were as follows :—

	<i>No.</i>
On plans, &c., for reconstruction or reconditioning of buildings	693
On applications for leases of land in Woodbrook	76
On premises in which building operations were in progress	229

Prosecutions.

<i>Offences.</i>	<i>No. of Cases.</i>	<i>Total Fines, &c.</i>
Failing to comply with nuisance notices	8	\$41.00
	2	Reprimanded
Failing to provide proper dustbins	3	\$ 4.80
	5	Reprimanded
Exposing cakes for sale at a height less than 2 feet from ground	2	\$ 7.20
Failing to register under Sale of Foodstuffs Bye-laws	5	\$10.70
	6	Reprimanded
Selling Milk without carrying badges or being licensed	4	\$ 6.20
	2	Reprimanded
Exposing unsound meat for sale	1	\$25.00
Total	23	\$94.90
	15	Reprimanded

Financial.

	1939	1940
	\$ c.	\$ c.
Revenue collected by Public Health Department	551 20	703 76
Expenditure	63,602 67	65,557 25

HEALTH WEEK.

No invitation from the Royal Sanitary Institute to carry out the observance of **Health Week** was received by the Local Authority in 1940 and none was undertaken. It had been decided last year to postpone the observance of **Health Week** *sine die*.

Changes in the Staff.

The following changes took place in the Staff of the Public Health Department during the year under report :—

1. Resignations :

Mr. W. R. Smith, Chief Clerk, as from 1st January, 1940, after 23 years' service.

Mr. T. H. Christian, Messenger, as from 9th January, 1940, after 23 years' service.

2. Appointments :

Mr. A. Wilson as Messenger with effect as from 1st April, 1940.

Mr. T. M. Mitchell, cert.R.san.I., as Chief Clerk, as from 1st May, 1940.

Mr. J. R. Howard, cert.R.san.I., as Sanitary Inspector, as from 1st May, 1940.

Mr. J. E. Parris as Overseer of Anti-Mosquito Unit, as from 1st May, 1940.

3. Obituary :

The deeply regretted death of Sanitary Inspector Frederick A. Howard took place on 25th October, 1940, whilst he was still in the service. The late Mr. Howard served with Government for several years prior to his transfer to the staff of the Port-of-Spain Local Authority on 1st January, 1917.

Leave of Absence.

<i>Sanitary Inspectors.</i>	<i>Vacation Leave.</i> <i>No. of Days.</i>	<i>Sick Leave.</i> <i>No. of Days.</i>
Ashe, G.	—	7
Assing, C. C.	28	—
Boxill, E.	—	21
De Four, H.	21	—
Hinkson, M.	84	—
Lamont, W. A.	21	—
Parris, J. W.	42	—
Pierre, G.	21	—
Rivers, F. B.	56	4
Romain, A.	112	27
Seon, F. E.	21	20
Wilson, I.	28	10
Wood, J. A.	28	17

Acknowledgments.

Mr. T. M. Mitchell, cert.R.san.I. was, on the 1st of May, 1940, appointed Chief Clerk to succeed Mr. W. R. Smith who retired at the end of 1939.

The Local Authority is to be congratulated on giving due recognition to an efficient, hardworking and conscientious Sanitary Inspector who has given of his best for seventeen years.

The members of the permanent staff, of whom all but three are Sanitary Inspectors, continued to work hard and to pull their weight conscientiously and loyally under the guidance of Mr. Ferreira, cert.R.san.I., Chief Sanitary Inspector and Mr. T. M. Mitchell, cert.R.san.I., Chief Clerk.

For this I am deeply grateful and I ask the Local Authority to remember their services and to hearken to their plea to be given the same consideration as clerks of the Corporation.

I also appreciate equally the work of the temporary staff without whose help it would be difficult to carry on the work of the Department.

